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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,657	06/30/2000	Fulvio Arecco	10676-0057-25	1321

7590 09/17/2004

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EXAMINER	
KIM, DAVID S	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/608,657	ARECCO ET AL.	
	Examiner	Art Unit	
	David S. Kim	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-10,13 and 16-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-10,13 and 16-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Examiner appreciates Applicant's compliance with the objections raised in a previous Office Action (Paper No. 14). Accordingly, the objections are withdrawn.

Claim Objections

2. Applicant's compliance with the objections to the claims in the previous Office Action (Paper No. 14, mailed 28 April 2004) is noted and appreciated. However, **claim 6** is objected to because of the following informalities:

In the 2nd-3rd to last lines, "the optical ring" is used where "the optical ring network" may be intended. Otherwise, antecedent basis is lacking.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-3, 13, and 16-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiragaki et al. (European Patent Application EP 920153 A2) in view of Cadeddu et al. (U.S. Patent No. 5,647,035) and Karasan et al. ("Optical restoration at the wavelength-multiplex-section level in WDM mesh networks").

Regarding claim 1, Shiragaki et al. discloses:

An autoprotected optical communication system (Figures), comprising:

a first optical carrier (ring 101 in Fig. 8) configured to transport optical signals in a first direction;

a second optical carrier (ring 102 in Fig. 8) configured to transport optical signals in a second direction that is opposite to the first direction (clockwise in ring 101 and counterclockwise in ring 102 in Fig. 8); and

a plurality of nodes (nodes A and B in Fig. 8) connected along the first optical carrier and the second optical carrier to form bidirectional links, the plurality of nodes communicating in pairs (pairs of nodes in Figures), one of the pairs defining a working link (working link in Fig. 11A) associated with a portion of the first optical carrier and a portion of the second optical carrier and being configured to exchange optical signals using a first wavelength ($\lambda 1$ in Fig. 8) on the first optical carrier (ring 101 in Fig. 8) and a second wavelength ($\lambda 3$ in Fig. 8) that is different from the first wavelength ($\lambda 1$ in Fig. 8) on the second optical carrier (ring 102 in Fig. 8) during a normal condition, the one pair of nodes being configured (Fig. 10) to exchange optical signals using the first wavelength ($\lambda 1$ in Fig. 10) on the second optical carrier (ring 102 in Fig. 10) and the second wavelength ($\lambda 3$ in Fig. 10) on the first optical carrier (ring 101 in Fig. 10) during a failure condition, wherein a response to the failure condition is executed on a channel level (notice that the protection switches in the figures enable switching for individual channels, i.e. 611 for the single channel on $\lambda 1$ in Figs. 9-10), and wherein each of the plurality of nodes comprises:

a plurality of information insertion devices (monitor circuits and protection switches in Figures) optically coupled to a signal input means (inputs to protection switches for transmitting in Figures) and configured to insert signaling information (col. 6, lines 1-4) into the optical signals; and

a plurality of information extraction devices (monitor circuits and protection switches in Figures) optically coupled to a signal output means (outputs from protection switches for receiving in Figures) and configured to extract signaling information from the optical signals (col. 6, lines 41-53),

wherein the plurality of information insertion devices (monitor circuits and protection switches in Figures) and the plurality of information extraction devices (monitor circuits and protection switches in Figures) optically couple an optical switch unit (switches in Figures) to the first optical carrier and the second optical carrier, and wherein the optical switch unit includes a number of switching blocks that is twice a number of protected channels (i.e. any four switching blocks in Fig. 9, two protected channels λ1 and λ2 in Fig. 9).

Shiragaki et al. does not expressly disclose:

said signal input means comprising an optical transmitter; and

said signal output means comprising an optical receiver.

However, Cadeddu et al. also teaches such input means comprising optical transmitters (Cadeddu et al., transmitters 14B and 15A in Figs. 3-6) and such output means comprising optical receivers (Cadeddu et al., receivers 14A and 15B in Figs. 3-6). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the inputs of Shiragaki et al. comprise transmitters and the outputs of Shiragaki et al. comprise receivers, as taught in Cadeddu et al. One of ordinary skill in the art would have been motivated to do this

since transmitters and receivers are inherently necessary to generate and process optical signals in the nodes of Shiragaki et al. in view of Cadeddu et al.

Shiragaki et al. in view of Cadeddu et al. still does not expressly disclose:

said information insertion and extraction devices including optical transponders being configured to change wavelengths of the optical signals.

However, Karasan et al. teaches such transponders (Karasan et al., page 1343, col. 2, last paragraph). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the transponders of Karasan et al. in the information insertion and extraction devices of Shiragaki et al. in view of Cadeddu et al. One of ordinary skill in the art would have been motivated to do this to provide adaptation of inter-node signals of one wavelength (such as 1.55 μm) to intra-node signals of another standard wavelength (such as 1.3 μm). "Such transponders thus arrest accumulating performance-degradations; provide the open, nonproprietary interfaces that permit multivendor interworking; and offer a means of carrying out the performance-monitoring and fault-localization that are essential in deployed networks" (Karasan et al., page 1343, col. 2, last paragraph – page 1344, col. 1, 1st paragraph).

Regarding claim 2, Shiragaki et al. in view of Cadeddu et al. and Karasan et al. discloses:

The system of claim 1, wherein each of the plurality of nodes selectively uses a predetermined subset of wavelengths ($\lambda 1$ and $\lambda 3$ in Fig. 10) within a set of transmission wavelengths ($\lambda 1$-$\lambda 4$ in Fig. 10), each of the plurality of nodes comprising:

a plurality of optical add/drop multiplexers (Fig. 10) serially connected to the first (ring 101 in Fig. 10) optical carrier and the second optical carrier (ring 102 in Fig. 10), respectively, each of the optical add/drop multiplexers configured to selectively perform at least one of adding the subset of wavelengths to the first optical carrier and to the second optical carrier,

dropping the subset of wavelengths from the first optical carrier and the second optical carrier, and bypassing remaining wavelengths ($\lambda 2$ and $\lambda 4$ in Fig. 10) of the set of transmission wavelengths.

Regarding claim 3, Shiragaki et al. in view of Cadeddu et al. and Karasan et al. discloses:

The system of claim 1, wherein each of the plurality of nodes comprises:

an optical transmitter (Cadeddu et al., transmitters 14B and 15A in Figs. 3-6);

an optical receiver (Cadeddu et al., receivers 14A and 15B in Figs. 3-6); and

a reconfigurable optical switch unit (protection switches and path switches in Figures) selectively coupling the optical transmitter (transmitters of Cadeddu et al. coupled to inputs to protection switches for transmitting in Figures of Shiragaki et al., see treatment of claim 1 above) and the optical receiver (receivers of Cadeddu et al. coupled to outputs from protection switches for receiving in Figures of Shiragaki et al., see treatment of claim 1 above) to the first optical carrier and the second optical carrier.

Regarding claim 13, claim 13 is a node claim that corresponds largely to a coherent combination of the limitations in system claims 1 and 3. Since all these claims are rejected under Shiragaki et al. in view of Cadeddu et al. and Karasan et al., the corresponding limitations of node claim 13 are found in Shiragaki et al., Cadeddu et al., and Karasan et al. Additionally, Shiragaki et al. in view of Cadeddu et al. and Karasan et al. coherently teaches the limitations in claims 1 and 3. That is, the limitations in claims 1 and 3 are not divergently taught under Shiragaki et al. in view of Cadeddu et al. and Karasan et al. Therefore, the recited means in system claims 1 and 3 read on the corresponding means in node claim 13. Claim 13 also includes limitations absent from claims 1 and 3. Shiragaki et al. in view of Cadeddu et al. and Karasan et al. also discloses these limitations:

an optical switch unit that includes a plurality of optical switches (protection switches and path switches in Figures) coupled to the transmitting transponders and the receiving transponders (Karasan et al., page 1343, col. 2, last paragraph), one of the optical switches being coupled to the optical transmitter (protection switches FROM NETWORK ELEMENT in Figures), another one of the optical switches being coupled to the optical receiver (protection switches TO NETWORK ELEMENT in Figures),

wherein the optical switches are configured to operate selectively under a normal operating condition and under a failure condition, the transponders using a first wavelength ($\lambda 1$ in Fig. 10) on the first optical carrier (ring 101 in Fig. 10) and a second wavelength ($\lambda 3$ in Fig. 10) that is different from the first wavelength on the second optical carrier (ring 102 in Fig. 10) during the normal condition, the transponders using the first wavelength ($\lambda 1$ in Fig. 10) on the second optical carrier (ring 102 in Fig. 10) and the second wavelength ($\lambda 3$ in Fig. 10) on the first optical carrier (ring 101 in Fig. 10) during the failure condition, a response to a failure condition being executed on a channel level (notice that the protection switches in the figures enable switching for individual channels, i.e. 611 for the single channel on $\lambda 1$ in Figs. 9-10), the optical switch unit including a number of switching blocks that is twice a number of protected channels (i.e. any four switching blocks in Fig. 9, two protected channels $\lambda 1$ and $\lambda 2$ in Fig. 9).

Regarding claim 16, Shiragaki et al. in view of Cadeddu et al. and Karasan et al., discloses:

The node according to claim 13, wherein the first wavelength and the second wavelength ($\lambda 1$ and $\lambda 3$ in col. 13, lines 30-35) are selected from a set of transmission wavelengths ($\lambda 1$- $\lambda 4$ in col. 13, lines 30-35), the node further comprising:

a plurality of optical add/drop multiplexers (ADMs in Fig. 9) configured to optically couple the transmitting transponders and the receiving transponders to the first optical carrier (ring 101 in Fig. 10) and the second optical carrier (ring 102 in Fig. 10) to feed and extract a

subset of wavelengths from the optical carriers, and to bypass remaining wavelengths ($\lambda 2$ and $\lambda 4$ in Fig. 10) of the set of transmission wavelengths.

Regarding claims 17 and 19-21, Shiragaki et al. in view of Cadeddu et al. and Karasan et al. does not expressly disclose:

the optical switches including:

- 2x2 switches and discrete switching components;
- an integrated switching matrix; or
- at least one of opto-mechanical switches, thermo-optical switches, magneto-optical switches, liquid crystal switches, semiconductor switches, electro-optical switches, micro-mechanical switches, and lithium niobate integrated circuit switches.

However, all these various switch configurations are well known and conventional in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the optical switches of Shiragaki et al. in view of Cadeddu et al. and Karasan et al. include one of these various switch configurations from this broad range of choices. One of ordinary skill in the art would have been motivated to do this to provide design flexibility, thus enabling one skilled in the art to make and use the node of Shiragaki et al. in view of Cadeddu et al. and Karasan et al. according to one's constraints in costs, space, and time.

Regarding claim 18, Shiragaki et al. in view of Cadeddu et al., and Karasan et al. discloses:

The node according to claim 13, wherein the optical switches include 1 x2 and 2x 1 switches (switches in Figures).

6. **Claims 6-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiragaki et al. in view of Cadeddu et al.

Regarding claim 6, claim 6 is a method claim that corresponds largely to a coherent combination of the limitations in system claims 1 and 3. In particular, many of the limitations in

method claim 6 correspond to the limitations of system claims 1 and 3 that are disclosed by Shiragaki et al. in view of Cadeddu et al.; however, this rejection of claim 6 does not rely on the teachings of Karasan et al. Since these limitations of claims 1 and 3 are disclosed by Shiragaki et al. in view of Cadeddu et al., the corresponding limitations of method claim 6 are found in Shiragaki et al. and Cadeddu et al. Additionally, Shiragaki et al. in view of Cadeddu et al. coherently teaches these limitations of claims 1 and 3. That is, these limitations of claims 1 and 3 are not divergently taught under Shiragaki et al. in view of Cadeddu et al. Therefore, the recited means in system claims 1 and 3 read on the corresponding steps in method claim 6. Claim 6 also includes limitations absent from claims 1 and 3. Shiragaki et al. also discloses these limitations:

an optical ring network (Figures);

detecting (col. 13, line 48 and col. 14, line 4) a failed link among the bidirectional links; and

transmitting a failure message (col. 7, lines 15-51, OAM frame) between the nodes in the one pair based upon at least one of non-receipt of the optical signals and receipt of the optical signals that are degraded (col. 7, lines 15-51), wherein a response to a failure condition is executed on a channel level (notice that the protection switches in the figures enable switching for individual channels, i.e. 611 for the single channel on λ1 in Figs. 9-10), and wherein the optical ring includes an optical switch unit that includes a number of switching blocks that is twice a number of protected channels (i.e. any four switching blocks in Fig. 9, two protected channels λ1 and λ2 in Fig. 9).

Regarding claim 7, claim 7 is a method claim that corresponds largely to the system claim 2. Therefore, the recited means in system claim 2 read on the corresponding steps in method claim 7. Claim 7 also includes a limitation absent from claim 2. This limitation is:

optically separating *each* wavelength of the respective subset of wavelengths from the set of transmission wavelengths.

Shiragaki et al. also discloses such separating (demultiplexers in Figures).

Regarding claim 8, Shiragaki et al. in view of Cadeddu et al. discloses:

The method according to claim 6, wherein the step of detecting comprises:

verifying, in each of the plurality of nodes and for each wavelength in the set of wavelengths, whether the optical signals are received (col. 7, lines 15-19, verification of signal reception is inherently part of monitoring the BER).

Regarding claim 9, Shiragaki et al. in view of Cadeddu et al. discloses:

The method according to claim 6, wherein the step of detecting comprises:

verifying, in each of the plurality of nodes and for each wavelength in the set of wavelengths, whether the optical signals are degraded (col. 7, lines 15-19).

Regarding claim 10, Shiragaki et al. in view of Cadeddu et al. discloses:

The method according to claim 6, wherein the step of detecting comprises:

verifying, in each of the plurality of nodes and for each wavelength in the set of wavelengths, whether the optical signals include a failure message (col. 7, lines 41-51).

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. **Claims 1-3, 6-10, and 16-21** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 39, 43 of copending Application No. 09/750,311 in view of Shiragaki et al. and Karasan et al.

Claim of instant application	Corresponding claim(s) of copending application	Limitation(s) of claim of instant application NOT expressly disclosed in corresponding claim(s) of copending application
1	39	- the one pair of nodes being configured to exchange optical signals using the *first* wavelength on the *second* optical carrier and the *second* wavelength on the *first* optical carrier during a *failure* condition obviousness argument: Shiragaki et al. teaches this configuration (Shiragaki et al., Fig. 8) as part of a fault recovery means. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement this fault recovery scheme and this configuration with the one pair of nodes of copending application. One of ordinary skill in the art would have been motivated to do this since doing so could enable short-length fault recovery routes and high efficient usage of transmission mediums (Shiragaki et al., col. 2, l. 19-22). - the optical transmitter - the optical receiver obviousness argument: Nodes of optical communication systems conventionally incorporate optical transmitters and optical receivers. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate these components. One of ordinary skill in the art would have been motivated to do this to transmit and receive optical communication signals. - plurality of information *insertion* devices - plurality of information *extraction* devices obviousness argument: Shiragaki et al. teaches a plurality of information insertion devices that insert information and a plurality of information extraction devices that extract corresponding information inserted by the information insertion devices (Shiragaki et al., col. 6, lines 41-53). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include both of such devices to the system of the copending application. One of ordinary skill in the art would have been motivated to do this to provide control for fault recovery means (Shiragaki et al., col. 6, lines 41-53). - *the optical transponders being configured to change wavelengths of the optical signals* obviousness argument: Karasan et al. teaches *optical transponders configured to change wavelengths of optical signals* (Karasan et al., page 1343, col. 2,

		last paragraph). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the transponders of Karasan et al. in the information insertion and extraction devices of the copending application in view of Shiragaki et al. One of ordinary skill in the art would have been motivated to do this to provide adaptation of inter-node signals of one wavelength (such as 1.55 μm) to intra-node signals of another standard wavelength (such as 1.3 μm). "Such transponders thus arrest accumulating performance-degradations; provide the open, nonproprietary interfaces that permit multivendor interworking; and offer a means of carrying out the performance-monitoring and fault-localization that are essential in deployed networks" (Karasan et al., page 1343, col. 2, last paragraph – page 1344, col. 1, 1st paragraph).
2	Combination of 39+43, see treatment of claim 1	
3	See treatment of claim 1	- the reconfigurable optical switch unit obviousness argument: Such a switch unit is part of the fault recovery means introduced by Shiragaki et al. (protection switches and path switches in Figures). See treatment of claim 1.
6	See treatment of claim 1	
7	See treatment of claim 1	- optically separating step obviousness argument: Such an optically separating step is part of the fault recovery means introduced by Shiragaki et al. (demultiplexers in Figures). See treatment of claim 1.
8	See treatment of claim 1	- verifying step obviousness argument: Such a verifying step is part of the fault recovery means introduced by Shiragaki et al. (col. 7, lines 15-19, verification of signal reception is inherently part of monitoring the BER). See treatment of claim 1.
9	See treatment of claim 1	- verifying step obviousness argument: Such a verifying step is part of the fault recovery means introduced by Shiragaki et al. (col. 7, lines 15-19). See treatment of claim 1.
10	See treatment of claim 1	- verifying step obviousness argument: Such a verifying step is part of the fault recovery means introduced by Shiragaki et al. (col. 7, lines 41-51). See treatment of claim 1.
13	See treatment of claim 1	

16	Combination of 39+43, see treatment of claim 1	- the optical add/drop multiplexers obviousness argument: Optical add/drop multiplexers are standard components for performing the add/drop/bypass operations of copending application claim 43.
17-21	See treatment of claim 1	- the 2x2 switches and discrete switching components - the integrated switching matrix - at least one of opto-mechanical switches, thermo-optical switches, magneto-optical switches, liquid crystal switches, semiconductor switches, electro-optical switches, micro-mechanical switches, and lithium niobate integrated circuit switches obviousness argument All these various switch configurations are well known and conventional in the art. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the optical switches of the copending application claim 39 in view of Shiragaki et al. in view of Karasan et al. include one of these various switch configurations from this broad range of choices. One of ordinary skill in the art would have been motivated to do this to provide design flexibility, thus enabling one skilled in the art to make and use the node of Shiragaki et al. in view of Cadeddu et al. and Karasan et al. according to one's constraints in costs, space, and time.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

9. Applicant's arguments filed on 12 July 2004 (Paper No. 15) with respect to the rejection of claims 1-3, 6-10, 13, and 16-21 under 35 U.S.C. 103(a) in view of the prior art of record have been fully considered but they are not persuasive. Applicant's arguments regarding these claims are based on limitations that were newly introduced to the claims by Applicant's amendment (12 July 2004, Paper No. 15):

- wherein a response to the failure condition is executed on a channel level; and
- wherein the optical switch unit includes a number of switching blocks that is twice a number of protected channels.

However, the standing rejections of these claims show in further detail how these claims are still not patentable in view of Shiragaki et al., Cadeddu et al., and Karasan et al. In particular, note the cited portions of Shiragaki et al. above.

10. Applicant's arguments filed on 12 July 2004 (Paper No. 15) with respect to the rejection of claims 1-3, 6-7, and 13 under the judicially created doctrine of obviousness-type double patenting in view of copending Application No. 09/750,311 in view of Shiragaki et al. and Karasan et al. have been considered but are moot in view of the new ground(s) of rejection. That is, Applicant's arguments regarding these claims are based on limitations that were newly introduced to the claims by Applicant's amendment (12 July 2004, Paper No. 15). However, in the intervening time period between Applicant's amendment (12 July 2004, Paper No. 15) and the writing of this present Office Action, an amendment to the claims of copending Application No. 09/750,311 was filed (16 July 2004). This amendment to the claims of copending Application No. 09/750,311 necessitated new double patenting considerations. Accordingly, the standing double patenting rejections are respectfully presented in view of this latest version of the claims of copending Application No. 09/750,311. In particular, note that this latest version of the claims of copending Application No. 09/750,311 also includes the same claim limitations introduced by Applicant's amendment to the instant application. More exactly, the following claim limitations are part of the independent claims in both this instant application and copending Application No. 09/750,311:

- wherein a response to the failure condition is executed on a channel level; and
- wherein the optical switch unit includes a number of switching blocks that is twice a number of protected channels.

The standing double patenting rejections show in further detail how the claims of the instant application are still not patentable in view of copending Application No. 09/750,311, Shiragaki et al. and Karasan et al.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 571-272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DSK

JASON CHAN
SUPERVISORY PATENT EXAMINER
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